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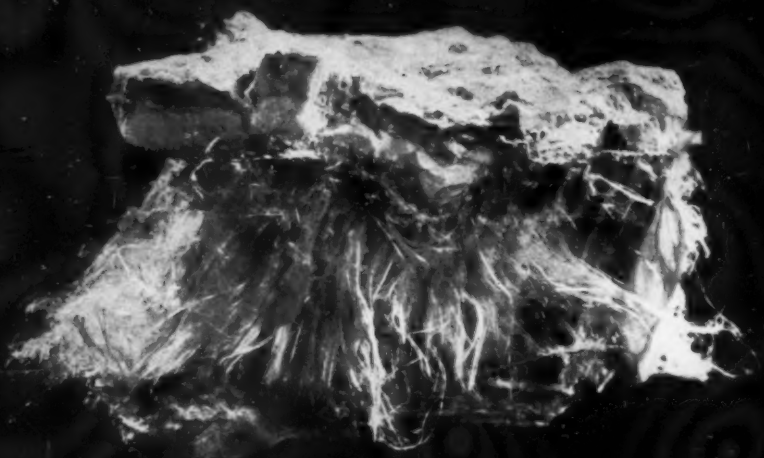

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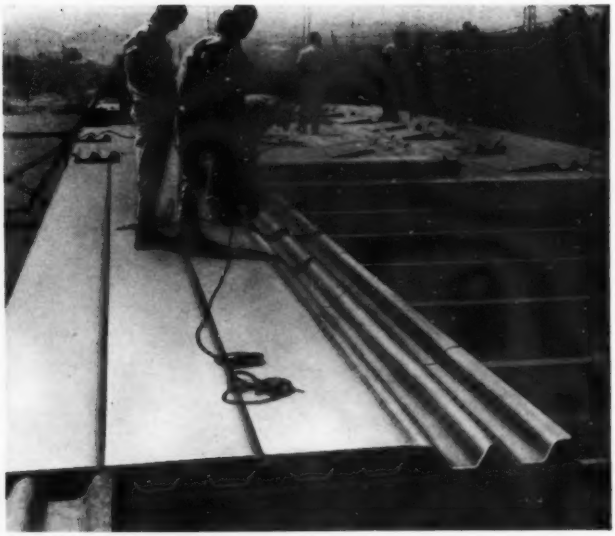

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THEORY-CUM-PRACTICE IN ASBESTOS PRODUCTION

By: W. E. Sinclair, M.I.M.M.

Several economic factors, apart from the spiralling cost structure today, combine to warrant consideration of a review of the question of asbestos production in our changing world conditions. It has been estimated that the world resources of all varieties of asbestos indicate a "life" of no more than seventy years, based on production and consumption in 1951 to 1956. Since then the output has mounted, while rapid advance in scientific and technological research in industry has shown that the demand for this mineral is growing and, in the future, will certainly increase to double the prevailing average.

In these circumstances, it appears reasonable to suggest that deliberation should be given to this position, that is, the future of asbestos in industry. There seems to be but two ways to resolve the question. First, the quest for new deposits should be intensified and, secondly, a concentrated economic study of productive methods must be reckoned as an essential need. This should apply not only in the field of existing producers, but in the many marginal or unpayable propositions that constitute a more or less wasted asset today; consisting as they do, mainly of lost ore. In many instances, such ore falls into an unpay category simply because of poor extraction methods resulting in high working costs.

Economics has been defined as the study of the application of a limited amount of means to an infinite number of ends. These in the asbestos field are boundless and although there may be limits to natural resources, there is no limit to the growth of knowledge, the application of which, given an adequate lead, can multiply indefinitely. This provides a means to satisfy our requirements for the future, not by the search for substitutes, but by effective and judicious utilization of our available natural resources.

Because of the many asbestos varieties and the inherent variables in each, economic production problems cannot be resolved in the manner of conventional textbook theses. A

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more specialized study of the subject is necessary, plus a definite conception that practice is often more fruitful than theory.

The basis of every facet of productive effort of this mineral, from the initial discovery to the final fabrication of the fibres depends, for higher and cheaper productivity, on the judicious direction of money, time and labor, and the least permissible amount of waste. It is the cautious employment of these factors, to obtain the greatest possible return, that constitutes the basis of productive efficiency which, in itself, promotes economical production.

In many asbestos mines and mills up-to-date productive measures are frequently applied as a result of the technological advance in mechanization, but even so there are practical aspects in the use of modern machines, in newly evolved working methods, that require detailed study to achieve major returns. This is necessary because relative values are involved in every example and therefore, the point where effective economy coincides with maximum efficiency must be carefully determined to achieve positive results.

MINING—The basic and primary work of ore extraction, both by open pit and by under-ground systems, has undoubtedly reached a high stage of modernization, in line with most other mining undertakings. Nevertheless, there is inevitably room for close and skilled supervision to ensure the highest efficiency without waste, either in time, effort or materials. The ever increasing tempo of productive machines and methods, makes it more essential than ever to study operational details; major functions will generally look after themselves, since machines step in today where previously increased productivity, at low costs, depended essentially on increased output per man shift.

The exploitation of sub-marginal reserves by economic methods should be a steadfast object in all asbestos undertakings to avoid wastage of ore and, at the same time, maintain maximum resources of latent ore, by the extraction of even the lowest grade ore-bodies.

Besides earnest consideration of modern trends in exploitation, in which mechanization and technological modes

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combine to form the principal means by which efficient operations are achieved, standardization is another important factor. But to maintain the highest possible standard of reliability it is equally important that the maximum simplicity of design be maintained.

Today, improved drills and equipment, to suit varying conditions are readily obtained. Detachable bits of various kinds are also obtainable: alloy steel and carbide tungsten bits which, with air legs for light hammer drills, permit of long hole drilling with light percussion drills or diamond drills. These modern appliances together with improved blasting materials and mechanical scrapers and loaders, have revolutionized the breaking of ground to produce large tonnages at much lower cost.

Many of these machines have been instrumental in dispensing with a number of manual operations, except in small isolated conditions where tonnages handled are limited to relatively small proportions. The same applies to ore transport methods, both underground and in open pit operations.

The changing design and trends in all mechanical equipment have acquired, in favourable conditions, characteristics that provide high energy utilization and a definite saving in handling large tonnages at low cost, despite a high initial capital outlay. However, it is rightly said that no matter what machine or method is employed, the limits of the operation are decided more by what can be handled than by what can be broken, a truism that constitutes but one important factor in the economic introduction of mechanized methods in mines and one that can well be applied to many other facets of productive operations.

The choice of the right method and suitable machines is a matter of vital importance in this respect. In some unusual or complex circumstances, expediency has been conveniently responsible for the employment of some new technique, coupled with modern equipment to successfully solve the peculiar or unusual conditions. Indeed, in many cases, such action gives an improvement in efficiency and more rewarding results.

A summation of these remarks, to achieve efficient ore extraction, careful deliberation is demanded, both as re-

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gards methods and means, because of the variety of conditions affecting normal recovery consistent with calculated tonnage requirements. Mechanization is not the simple answer, indeed the idea of mechanization is, in many instances, being overdone, notwithstanding its immense value in the correct sphere. In every case its employment needs careful consideration, because in every and any circumstance, it is not an end to itself, but only in the right place is it an important factor in mining economy.

Admittedly, the rapid growth of mechanical science and technology in plant and equipment has resulted, not only in advanced mechanical methods but is still expanding in other ways. This evident from the spectacular advance in electronics and atomic physics, which make it possible for machines to carry out certain functions without manual attention, except for push button control by one person—wrongly termed "automation". This state of perfection, however, does not always spell increased economic productivity, except perhaps in factories and mills, where the many variables and peculiarities, present in mining, are absent.

MILLING—Many of the above observations apply equally to the extraction of fibre from the ore. Indeed here, despite even greater advances in milling technique, resulting from revolutionary improvements in milling machinery, the importance of applied economics is more essential.

The fundamentals of separation, concentration and recovery, involve a multiplicity of problems because of the diverse nature of asbestos plus the extreme difference in the several varieties. These conditions are often complicated by the association of other minerals or extraneous foreign constituents in the ores. The removal of these undesirable elements comprise only a fraction of many unusual milling features, that call for specialized treatment necessary to effect the final production of graded asbestos of accepted quality.

On the world markets, the selling price of asbestos often depends on these qualities, especially to meet the selective demands of manufacturers.

Although in recent years milling systems have, to a

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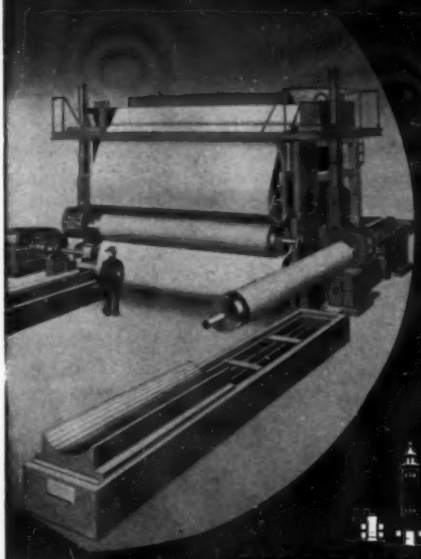

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great extent, become more or less standardized, there still exists a modification of practice based on individual likes and dislikes. This is understandable in some respects when cognizance is given to the inconstancy in the ores containing the different varieties of asbestos and the need, therefore, for specialized processing systems. For the same reason, the standardization of milling machines and auxiliary equipment cannot always be satisfactorily achieved to overcome the many differences.

Nevertheless, the ever present existence of many constitutional variables inherent in different asbestos ores has in no way retarded the advance in milling technique, indeed modern practice, based on experience, has developed a positive pattern, if not a strictly standardized system, of dry pneumatic separation.

Improved plant design has assisted considerably in processing advance to produce perfect standard fibre grades. This is but a natural effect brought about by the changing phases of industry, principally because manufacturers, to conform to modern fabrication techniques, require clean fibre graded to standard classified specifications.

It is quite evident and generally accepted in modern practice that pneumatic processing has proved to be the most economic method as is indicated by the fact that little success has been gained in the several efforts to radically change the process, to lower costs by the use, for example, of such methods as dispersing agents to supplement or replace certain mechanical plant, or by wet methods of separation.

Although wet processing is being employed in a limited scope in the treatment of tailings or in conjunction with asbestos paper fabrication plants, the proved all dry method maintains its place of priority.

Extreme variations in rock conditions, as is found in the amphibole ores, especially in the extraction of amosite and crocidolite and anthophyllite, and their long fibre crudes, require special consideration. This applies mainly to the effective utilization of processing machines and their correct placement to secure maximum and efficient results.

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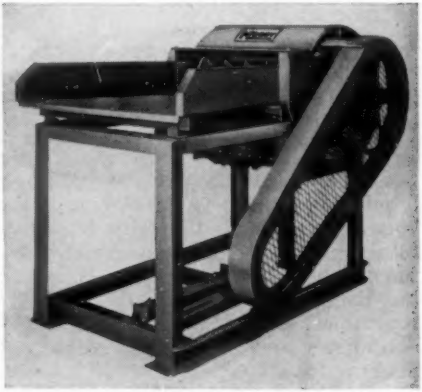

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CONCLUSION—General consideration of the above suggestions aimed at achieving a goal of economic productivity in the asbestos field, clearly shows that coordination in every operation is, in itself, an overall purpose towards the elimination of wasted effort, profitless overlapping and futile expenditure. These all promote maximum efficiency which is the basis of low cost production.

HELLENIC INDUSTRY FOR BUILDING MATERIALS COMPANY LIMITED, of Athens, Greece, has recently completed a new asbestos-cement products plant on the island of Euboea, near the town of Chalkis. This plant is the only one to manufacture asbestos-cement products in Greece and makes asbestos-cement high pressure pipes and asbestos-cement flat and corrugated sheets. Its planned annual output of 25,000 tons of pipe and 20,000 tons of sheet exceeds current local demand by almost 100 per cent, but it is hoped that export markets can be developed in neighboring countries.

BEGINNING WITH the March 1961 issue of "Materials Research & Standards", the name of *A. Q. Mowbray* appears on the masthead as Editor. This is a deserved recognition, since he has essentially been carrying out this function for some little time. He was largely responsible for the transition from the "ASTM Bulletin" to the present MR&S, with increasing emphasis on the publication of technical material. Mr. Mowbray joined the ASTM Staff in July, 1958.

It is hoped that this journal, one of the most important of the Society's publications, will continue to grow, under his direction, in character and significance and in service to its members.

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CANADIAN ASBESTOS—1960

By: H. M. Woodrooffe

(Supervisor, Industrial Minerals Sub-Division, Mineral Processing Division, Department of Mines and Technical Survey, Ottawa, Canada.)

The Canadian asbestos industry enjoyed a record year in 1960 with shipments 6% ahead of the 1955 all-time high. According to the Dominion Bureau of Statistics, 1,140,000 tons valued at $118 million were moved to markets. The increase was almost entirely a reflection of greater production in the Eastern Townships of Quebec.

Shipments of Group 4 were up 25%; Groups 5 and 6 were also produced in greater quantity to satisfy export markets; Group 7 was virtually unchanged. It is significant that the grades most in demand were those used by the asbestos-cement industry. Although building construction on the North American continent in 1960 was slightly behind that of 1959, non-residential building showed an increase. This segment of the industry is an important market for asbestos-cement products.

Canada's long-held dominant position as a producer of asbestos is being challenged by growing production in Russia. Much was learned of the Russian industry during an exchange of visits by technical experts of the two nations in the second-half of the year. Current production in the two countries is about the same. However, plans projected to the end of 1965 call for increased production in Russia above that projected for Canada which, if completed, would result in an annual output of more than 2,300,000 tons. To provide for the increase, a new and very large mill is to be built in the Bazhenova region and a new deposit opened up in Kazakstan province. Recent information in a Russian publication reveals a remarkable growth over the past few years of the asbestos-cement industry. The current 7-year program is aimed at more than doubling production of asbestos-cement roofing and pipe and a diversification of products. Such a plan would require much of the additional capacity projected for the Russian asbestos industry.

A major development in Canada was the decision in

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October to prepare the Newfoundland deposit of Advocate Mines Limited for production in 1963. The decision followed an intensive exploration and testing program by Canadian Johns-Manville Company Limited. Associated in the development with Canadian Johns-Manville are Patino of Canada, Amet Corporation Incorporated, and Financiere Belge de L'Asbest-Ciment S.A. The property, located at Baie Verte on the Burlington Peninsula, is a potential source of fibre for the asbestos-cement industry.

Murray Mining Corporation Limited continued exploration of a deposit near Deception Bay in the Ungava Bay area of northern Quebec. Further diamond drilling in 1960 added to the company's estimate of possible ore reserves.

Early in the year, an important new use for short fibre asbestos became a possibility. The addition of 2% to 3% of Group 7 asbestos to asphalt paving mixtures has been demonstrated to increase the resistance of road surfaces to loads and temperature variations, improving flexibility and resistance to cracking, especially at low temperatures. Johns-Manville Corporation, which pioneered the development, forecasts an eventual market of one-half million tons annually for this use.

Reprinted from the Canadian Mining Journal, February 1960.

First model of the molecular structure of asbestos ever to be made in England will be shown on the stand of CAPE INSULATION AND ASBESTOS PRODUCTS LIMITED, newly-formed subsidiary of *The Cape Asbestos Company Limited*, at the Engineering, Marine, Welding and Nuclear Energy Exhibition which opens at Olympia, London, on April 20th, 1961. This model has been made for a new technical publication "Asbestos The Raw Material" being published by Cape Asbestos in time for the opening of the exhibition.

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Capital Improvement Program

Frederic A. Soderberg, General Manager of the Huyck Felt Company, has announced the company's plans for a two-million dollar plant improvement program. Mr. Soderberg noted that the program was half completed during 1960. Last year, the company spent $1.100,000 for new equipment and plant modernization.

In 1961, Huyck plans to spend an additional $1,100,600 for equipment and plant renewal. Included in the program is the expenditure of $642,300 for the purchase of new weaving equipment. Other purchases to be made are equipment for the Huyck Science Center ($115.000): Yarn and finishing machines ($156,900) and several items of manufacturing equipment totalling $182,200.

Huyck Felt is making these improvements to provide the most modern equipment available to industry for the manufacture of the papermaking felts. Plant improvements are being made to increase the efficiency of the manufacturing process.

The Huyck Felt Company was founded in 1870 by Frank C. Huyck. It is a division of the Huyck Corporation which operates eight plants in five States and Canada and serves a world-wide market. The Huyck Felt Company operates plants in Rensselaer, New York, and Aliceville, Alabama. Its Canadian affiliate is Kenwood Mills Limited at Arnprior, Ontario.

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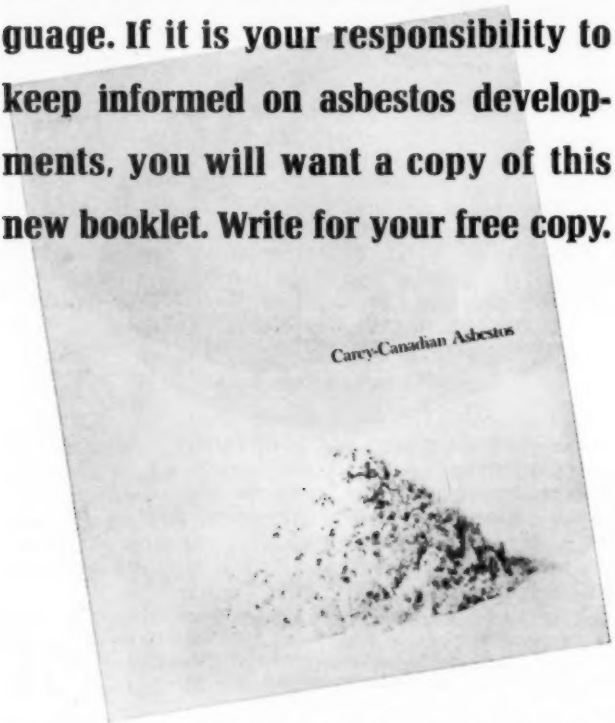
The Cape Asbestos Company Limited, London, England, have taken a financial interest in Aislantes Industriales, S.A. de C.V. of Mexico City, manufacturers of foamed polystyrene insulation products and asbestos "Aircell" pipe covering for low temperature work. Early in 1961, Aislantes Industriales will begin manufacture of "Caposite", amosite pipe sections for high temperature insulation.

Aislantes Industriales, S.A. de C.V. was originally founded early in 1959 under the corporate name of Frigolit Mexicana, S.A. by Mr. H. Rowe Morris, who is head of the Materiales Aislantes group of companies, the leading manufacturers and contractors for thermal insulation in the Republic of Mexico. Materiales Aislantes, S.A. of Monterrey, founded in 1939 by Mr. Morris, was the first company in Mexico to manufacture mineral wool products, and for the past twenty-one years this company has specialized in high temperature industrial insulations for heat control in steel mills, power plants, paper mills, sugar refineries. Over many years it has been entrusted with a very large portion of business for PEMEX, the national Mexican oil company.

About five years ago, Materiales Aislantes, S.A. of Mexico City was established as a fully-coordinated insulation sales company. In 1959, to broaden the range of thermal insulations produced in Mexico and to include low temperature insulations, Mr. Morris, along with Messrs. Hans Lenz, Ing. Alejandro Robles Gil, and other leading industrialists in Mexico, formed Frigolit Mexicana, S.A. to manufacture foamed polystyrene products. In August of 1960, with the advent of Cape Asbestos financial participation and the plan to further broaden the activities to include high temperature moulded amosite insulation, the corporate name of Frigolit Mexicana, S.A. was changed to Aislantes Industriales, S.A. de C.V.

A new factory is under construction by Aislantes

Asbestos users! Here is the story of Carey-Canadian Asbestos in your language. If it is your responsibility to keep informed on asbestos developments, you will want a copy of this new booklet. Write for your free copy.



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consistently uniform from shipment to shipment

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P. O. Box 95, Cincinnati, Ohio, for free booklet.

Industriales, S.A. de C.V. in Santa Clara, some 15 miles north of Mexico City. Specialized equipment will be supplied by Caposite Insulations Limited, a Cape Asbestos associated company in Canada. To the fullest possible extent, however, the plant and production equipment is being supplied from local sources in Mexico. The production of "Caposite" insulation in Mexico is expected to start early in 1961, and the product will be marketed by Materiales Aislantes, S.A. of Mexico City. Thus, Mexico will be the twelfth country in the world in which these materials (made from Amosite Asbestos produced in Cape Asbestos mines in the Union of South Africa) are manufactured locally. The other eleven are Great Britain, Japan, Argentina, Canada, South Africa, Italy, Holland, Spain, Australia, France (as Isolamiante), and U.S.A. (as Unibestos).

Mr. Robert E. Cryor, President of North American Asbestos Corporation and Cape Asbestos (Canada) has been nominated to the Board of Directors of Aislantes Industriales, S.A. de C.V. to represent the interests of Cape Asbestos Company Limited.

NORMAN LEEDS, JR., 59, Assistant General Manager of the Raybestos Division, *Raybestos-Manhattan, Inc.*, died March 12, 1961, in Bridgeport, Connecticut. Mr. Leeds, a native of Stamford, lived in Bridgeport since childhood, completed his secondary schooling at Choate Academy and graduated from Yale with a BS degree in Engineering in 1923.

At Raybestos, Mr. Leeds served, successively, as Process Engineer, Service Engineer, Assistant Sales Manager, Factory Manager, and, since 1956, as Assistant General Manager. He was elected to the Board of Directors of the parent company in 1955.

Active in civic and industrial affairs in the Bridgeport community for three decades, he was a member of the Board of Directors of the Bridgeport Manufacturers Association, The Bridgeport Chamber of Commerce, the Bridgeport Public Library and had served as a past President of the University Club.

CAPE blue

noted for its
tensile strength
resiliency
fast filtering

resists
action of acids
and all
common chemicals

withstands
high temperatures

direct from our own South African mines—

BLUE asbestos fiber

Select the strongest of all fibers, from the world's largest producers of Blue (crocidolite) asbestos. Know about its use in molded plastics; as a base for rubber and synthetic impregnants; as reinforcement for bituminous products; as a reinforcement for cements, mortars, refractories. Write for Bulletin 201.

NAAC

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NORTH AMERICAN ASBESTOS CORPORATION

Board of Trade Building • Chicago 4, Illinois

In Canada

CAPE ASBESTOS (Canada) Limited

200 Bloor Street East • Toronto, Ontario • Canada

Subsidiaries of The Cape Asbestos Company Ltd. • London

JOHNS-MANVILLE CORPORATION

Flex-Ponent System

Johns-Manville Corporation took the wraps off a new system of contruction aimed at producing lower cost, quality housing.

The newly-developed system permits simultaneous erection of exterior and interior wall surfaces ready for final finishing, complete with vapor barrier and insulation, through use of prefabricated, modular panels. These new panels utilize an entirely new board product specially developed for these applications and a new adhesive joint compound.

The new products and new method of residential construction have been named *The Flex-Ponent System* by J-M. The new factory-assembled panels are unique in that they can be used to construct houses of almost any architectural design. Standard panel sizes are 4x8 feet but various other sizes will also be available.

J-M intends to make detailed information on this system, accumulated through long scientific research and erection of several "proof" houses under company supervision, available to J-M jobber, dealer and fabricator customers. The company hopes that its development of this type of low cost, quality housing will perform a service not only for J-M customers but for the whole economy and put much-needed good housing within reach of moderate and low-income groups.

ASBESTOS FIBRES
ASBESTOS WASTE
Frank G. Ruggles Co. Inc.
26 BROADWAY
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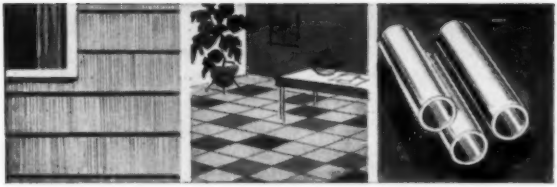
High grade asbestos fibers produced to your needs



Shingle and siding stock, floor tiles, brake linings, insulating coatings, pipe or plastics – name your product–Flintkote's research laboratories are completely equipped to determine and recommend the grade and characteristics of asbestos fiber your product needs. Flintkote Mines extensive facilities mill fibers to meet every requirement!

If asbestos fiber is a factor in your manufacturing process, call or write Flintkote for a quick answer to any problem.

Flintkote Mines, Ltd.

(Subsidiary of the Flintkote Company) Thetford Mines, P.Q., Canada · New York Office: 30 Rockefeller Plaza, New York 20, N.Y.

FLINTKOTE®

· Toronto Office: 30th Street, Longbranch, Toronto, Ont., Canada · London Office: Adam House, 1 Fitzroy Square, London W-1, England

CANADIAN SPECIFICATIONS

The Index of Canadian Specifications has been revised as of December 30, 1960, and a copy can be obtained from the Secretary, Canadian Govrnment Specifications Board, National Research Council, Ottawa 2, Canada.

Following are the Specifications on Asbestos materials which are included in this Index (Price—10¢ each, except as otherwise noted):

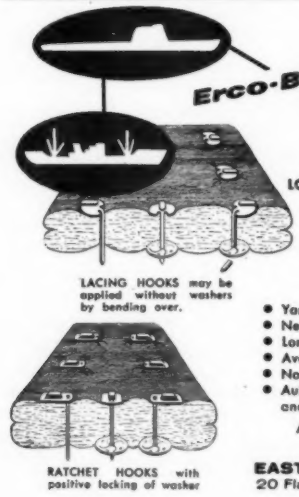
34-GP-1a	Pipe; Asbestos Cement, Pressure
34-GP-2a	Pipe; Asbestos Cement, House Connection
34-GP-3a	Shingles; Asbestos Cement, Roofing
34-GP-4a	Shingles; Asbestos Cement, Siding
34-GP-5b	Sheets; Asbestos Cement, Corrugated
34-GP-7a	Methods of Sampling & Testing Asbestos-Cement Products (20¢)
34-GP-8	Conduit; Asbestos Cement, Electrical
34-GP-9b	Pipe; Asbestos Cement, Sewer
34-GP-10	Pipe; Asbestos Cement, Industrial Vent
34-GP-11	Pipe; Asbestos Cement, Flue
34-GP-12	Sheets; A-C, for Electrical Purposes
34-GP-13	Sheets; Asbestos-Cement, Dielectric
34-GP-14	Sheets; Asbestos-Cement, Flat, Decorative
34-GP-16a	Sheets; A-C, Flat, Fully Compressed
34-GP-17b	Sheets; A-C, Flat, Semi-Compressed
34-GP-18	Sheets; Asbestos, Low Density
34-GP-19	Panels; A-C, for Acoustical Purposes
34-GP-20	Asbestos-Fibre-Sprayed Insulation, with or without Mineral Wool (15¢)
34-GP-21	Sheets; Sandwich, A-C & Fibreboard (15¢)
51-GP-1	Thermal Insulation, (Amosite) for Piping, Machinery and Boilers for Marine Use
51-GP-2	Thermal Insulation (Calcium Silicate-Asbestos) for Piping, Machinery and Boilers for Marine Use
51-GP-3	Thermal Insulation (85% Magnesia) for Piping Machinery and Boilers for Marine Use
51-GP-4	Thermal Insulation (Diatomaceous Silica-Asbestos) for Piping, Machinery and Boilers for Marine Use (15¢)
51-GP-5	Thermal Insulation, Back-Up

51-GP-6 Cement; Insulating (15¢)
51-GP-7 Cement; Finishing
51-GP-8 Asbestos Cloth and Twine for Use with Thermal Insulation (15¢)

Specification and Drawings for Quebec Standard Asbestos Testing Machine, Model No. 2, 1938—NRC No. 3470 ($25.00).

RICHARD R. DILL, Manager of Sales for the Industrial Division of *The Bauer Bros. Co.*, Springfield, Ohio, died Sunday, March 19th, 1961, of a heart attack. He was 46 years old, and had been with Bauer Bros. 23 years.

Mr. Dill started with Bauer Bros. in inventory control before entering the sales field. After 14 years in the Chicago, Illinois, sales territory, he was transferred to the home office in Springfield last summer, when he was appointed to his managerial position.


Erco-Bergen HOOKS
LACING HOOKS may be applied without washers by bending over.
RATCHET HOOKS with positive locking of washer

LOW COST FASTENERS FOR REMOVABLE TYPE INSULATING BLANKETS.

- Used extensively by contractors & shipbuilders on TURBINE BLANKETS, VALVE & FLANGE COVERS, PUMPS, EXHAUST MANIFOLDS
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- Available in cadmium plate or stainless steel
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Available in three sizes 2½" - 4" - 7"

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EASTERN REFRACTORIES CO., Inc.
20 Flanders Road Belmont 78, Mass.

AUTOMOBILE SALES

	January 1961
Passenger Cars	406,616
Motor Trucks	79,039
Motor Coaches	278
	485,933

In January 1960, a total of 792,351 motor vehicles were sold. In the year of 1960 the total was 7,869,271.

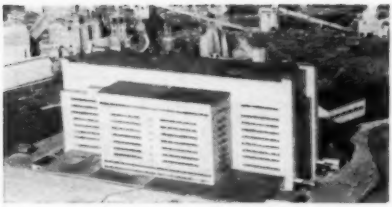
These figures were supplied by the Automobile Manufacturers Association, New Center Building, Detroit, Michigan.

TURNERS ASBESTOS CEMENT COMPANY LIMITED, Trafford Park, Manchester, England, a member of the Turner & Newall Organization, are manufacturers of "TURNALL" Asbestos Ships Board. They will be showing at the Engineering Marine Welding and Nuclear Energy Exhibition for the first time.

"TURNALL" Asbestos Ships Board, which was developed to meet the requirements of the International Convention for the Safety of Life at Sea, 1948, and the Merchant Shipping (Construction) Rules, 1952, will be displayed to show internationally approved methods of constructing "A" and "B" Class fire resisting divisions. Particular attention will be given to showing the application for the construction of cabin bulkheads, linings and doors.

"TURNALL" Asbestos Ships Board may be faced with a wide variety of decorative facings, and the exhibits will show how this non-combustible material replaces more traditional materials, to provide a high degree of protection in the event of fire on board ship, without imposing restrictions on the design scheme of the decorative architect.

With the increasing use of aluminium in ship construction, Turners Asbestos Cement Company Limited will also be showing, as a result of recent full-scale fire tests, how aluminium structures may be fully protected in the event of the outbreak of fire.



Processing in the world's largest asbestos mill

checked by modern control laboratories

. . . makes J-M Asbestos Fibre the dependable ingredient in the batch

Johns-Manville's new asbestos mill at Asbestos, Quebec, is the largest in the world. Yet every batch is scientifically sampled and then analyzed in modern control laboratories to assure the thoroughly accurate grading.

Production, development and control facilities are all centralized under one roof, permitting the unified control of quality and uniformity.

The mill is operated by 600 skilled workers with the latest and most efficient equipment available. Write for information telling why Johns-Manville is best equipped to serve your asbestos fibre needs. Address Asbestos Fibre Division, Canadian Johns-Manville Co., Ltd., P. O. Box 1500, Asbestos, P. Q., Quebec.

JOHNS-MANVILLE

MARKET CONDITIONS

GENERAL BUSINESS.

The slow decline in general business activity showed signs of halting recently. Industrial production was steady in February and auto sales showed a pickup in early March. As against these more favorable signs personal income decreased again in February. Leading economists seem generally agreed that the recessionary trend is stopping but most are loath to predict when the expected upturn will begin. A relatively stable condition at present levels seems likely for some months to come before an upward surge will begin. The stock market through its strength on high volume indicates that investors are looking for better business in the reasonably near future.

ASBESTOS—RAW MATERIAL.

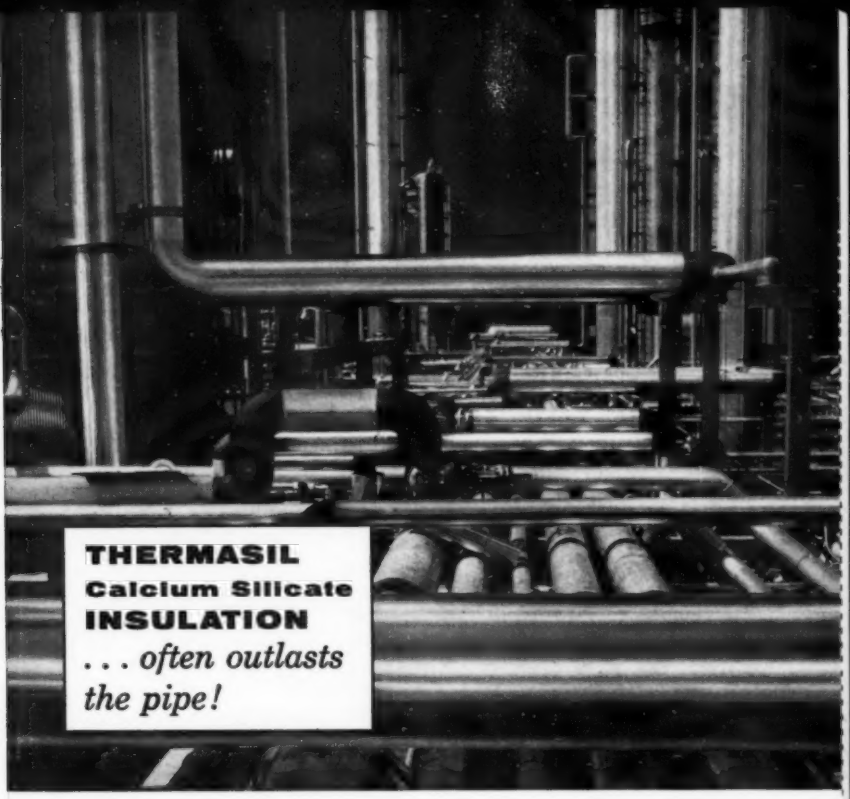
February 1961 asbestos fibre shipments at 54,494 tons were 6,360 tons or approximately 10% lower than February 1960. Shipments to date are running 10,714 tons or 9% below the same period last year. 1961 fibre shipments are expected to exceed those of 1960 by approximately 5% rather than 10% as reported in March 1961 "ASBESTOS".

All fibre grades are in ample supply.

ASBESTOS—MANUFACTURED GOODS.

Asbestos Brake Lining. Business at present is slow but improvement is anticipated in the replacement market and the equipment market should pick up when good weather arrives in the northern sector of the United States.

Asbestos Paper. The present market for this product appears to be fairly steady as to price, with little change in demand. The outlook suggests that there will be a moderate increase in demand in the second half of this year, but probably not enough to cause any significant change in price level. Orders for *Asbestos Millboard* have slowed down considerably as a result of the overall economic condition. It is anticipated that the volume of business will increase some time after May of this year.



THERMASIL 85% Magnesia frequently outlives equipment and piping. Moisture resistant and durable, shock resistant and structurally stable, THERMASIL makes your first cost your last. Teamed with sheet aluminum for protection against temperature extremes, sandstorms and tornadoes, THERMASIL is used throughout this Texas refinery to *keep heat balances constant.* For more information on B-E-H THERMASIL and the complete B-E-H line of industrial insulations for temperatures from sub-zero to 1900 F, see your distributor or write for new Catalog.

B E H
BALDWIN-EHRET-HILL

BALDWIN-EHRET-HILL
500 Breunig Avenue Trenton 2, New Jersey

Asbestos-Cement Products. The market situation at present for products used for residential construction continues very depressed due to continuing seasonal factors as well as the low level of residential construction. The outlook indicates possible improvement over last year, but very dependent upon housing starts this spring. Products used for commercial and industrial construction are selling at somewhat better levels and should continue to move in reasonable volume for the balance of the year.

High Pressure Insulation. The present market situation is about the same as reported last month and an even greater improvement is expected during the last half of this year.

Shingles—Roofing & Siding. Order placements to date are considered slightly better than the normal seasonal increase and the outlook for the balance of the year is good.

Asbestos Pipes. The market situation at the present time is about the same as it has been with capacity considerably in excess of demand. The outlook appears hopeful, but is dependent on the level of housing starts.

The above comments have been made by various informed executives in the Industry. All comments are welcome.

NATIONAL GYPSUM COMPANY's deposit at Thetford Mines, Quebec, Canada, is estimated to contain more than 70 million tons of fibre-bearing ore which yields about 6% usable fibre. The ore is processed through the mill at the rate of about 3,000 tons per day and the fibre is graded according to its length. The longer, higher-priced fibres are sold to others for making fireproof fabrics. The medium lengths are used in the company's three asbestos-cement plants where the asbestos fibre is mixed with portland cement and formed into hard, durable panels for roofing or siding, and for corrugated or flat building board. The shorter fibres are used in the production of wallboard "joint cement", and in some paints. Fibres, in various lengths, are also sold in domestic and foreign markets to manufacturers of paper, plastics, floor covering and other building products.

asbestos cement department
TORINO - VIA S. TERESA 10 - ☎ 55.35.76 - 52.41.33

NOTICE

The R.C.M. Company (Revisione Costruzione Macchine) - 10, Via Santa Teresa - Turin - Italy, wishes to inform that anybody interested is invited to visit a very modern Factory in Italy where an R.C.M. automatic installation is in working activity for the manufacture and finishing of Asbestos-Cement pressure and non-pressure Pipes, also of small diametre.

Examination of this installation will clearly show the results reached by the R.C.M. Company in the construction of machinery for the Asbestos-Cement Industry.

This machinery permits the use of lower priced asbestos mixtures while producing the same quality product in accordance with the standards now in force.

BUILDING

Contracts for future construction in the United States in February 1961 dipped slightly below the comparable month last year despite sharp gains in most non-residential building types, F. W. Dodge Corporation reported. February construction contracts totalled $2,235,367,000, down less than one-half of one per cent from a year ago.

Contracts for non-residential buildings were very strong in February, rising 15% above a year ago to $804,427,000. Notable increases were scored in contracts for educational, commercial, manufacturing, hospital and public buildings, while religious building contracts fell 4% below last year.

Heavy engineering contracts in February rose 1% to $561,048,000. Within this category, public works contracts dropped 5%, reflecting a fairly sharp decline in highway contracts which had been particularly strong in recent months. Utility contracts, on the other hand, rose 18% due to a large gain in pipeline contracts which offset a decline in electric light and power system contracts.

February contracts for residential buildings amounted to $869,892,000, down 12% from the same month last year. The number of dwelling units represented by the February contracts totalled 64,521, down 15% from a year ago.

On a seasonally adjusted basis, the Dodge Index of construction contracts was reported at 239 in February (1947-49=100), compared with 273 in January and the all-time high of 302 in December.

A summary of the latest figures for February 1961 follows: Non-residential building $804,427,000, up 15%; Residential building $869,892,000, down 12%; and, Heavy Engineering $561,048,000, up 1%—Total Construction $2,235,367,000, down less than ½%.

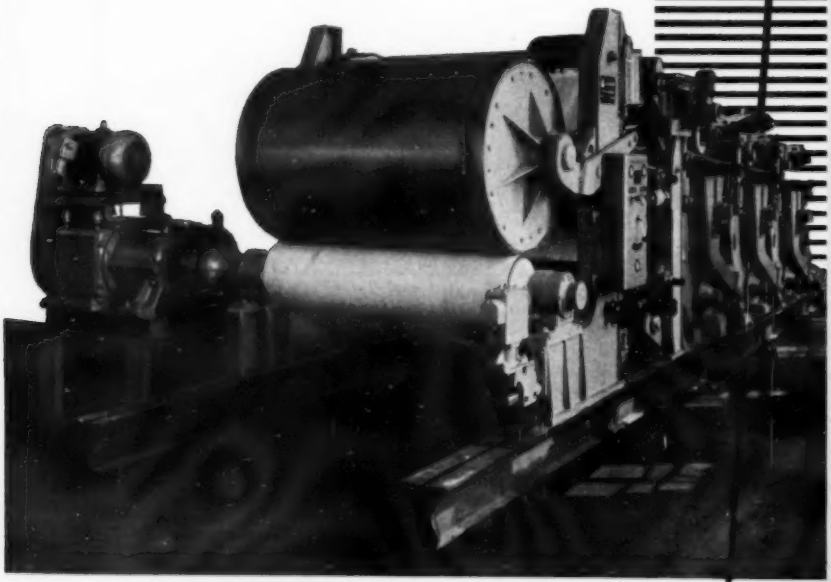
CORRECTION—In the February 1961 issue of "ASBESTOS", on page 52, Turner & Newall Limited's net profit figure for the year should be £7,624,706 instead of in U. S. dollars.

All machinery for the equipment of plants producing asbestos-cement pipes and sheets

covering the entire production process from the stock preparation to the testing of the finished product.

All machinery for wet or dry preparation of asbestos-cement / Asbestos silos.
Sheet producing machines with one to three cylinder moulds, automatic or semi-automatic combined production lines for flat and corrugated sheets.
Piling equipment combined with cleaning and lubricating machinery for flat and corrugated steel sheets, suitable also for automatic operation / punching and trimming machines / hydraulic presses.
Pipe winding machines for the production of pressure pipes of up to 5 metres (16 ft. 5 in.) length and 1000 millimetres (3 ft. 3 in.) dia / lathes for pipes and joints / cutt-off grinders / testing presses for pipes and joints / calenders for the forming of plain and joint-fitted pipes / mandrel pull off machines / autoclaves for hardening of asbestos-cement sheets and pipes as well as many other units, pumps and accessories.

Leaflets describing individual machines will be readily sent on request.



J.M.VOITH A.G.

St. Poelten – Austria

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SM 746 e

NATIONAL GYPSUM COMPANY has released a new 12-page manual giving complete, clear explanations of the "R" Factor in Insulation and of the "All Weather Comfort Standard" as recently adopted by national Electrical and Insulation associations.

Designed to fill the need for up-to-date information on the new Quality Home Requirements for insulating homes for Electric Heat, and also to present the new nation-wide standards for easy reference, the booklet also shows how various Insulation products should be specified and installed for maximum benefit. Various details of vapor barrier, ventilation and amount of Insulation necessary for a given installation are covered. The booklet also includes cost estimating data for heating homes insulated with Gold Bond Mineral Wool Products

Form 4015, "Building With Gold Bond Mineral Wool Insulation" is readily available through Gold Bond Representatives, or write National Gypsum Company, Buffalo 2, New York.

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Complete Consulting Engineering Services for the Asbestos Industry

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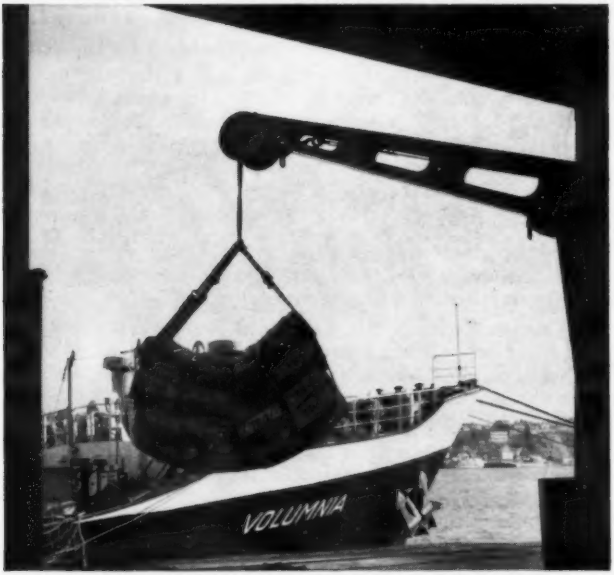

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Now through our new network of 24 overseas representatives a complete selection of Gold Bond® Asbestos Fibres can be shipped anywhere in the world, swiftly and efficiently. For your nearest representative, write National Asbestos Mines Ltd., Thetford Mines, P.Q., Canada. (Subsidiary of National Gypsum Company).

a step ahead of tomorrow

Gold Bond
INDUSTRIAL PRODUCTS

AUTOMOBILE FACTS AND FIGURES

The 1961 edition of the statistical yearbook, "Automobile Facts and Figures", has been published by the Automobile Manufacturers Association. This 40th edition contains more than 70 pages of charts, tables and indexes, covering production, employment, factory sales, vehicle registrations, traffic safety, car ownership and use, automotive taxes, and highway statistics.

Following are a few highlights: Passenger car factory sales in the U.S. for 1960 were the second highest in history, topped only in the record year of 1955.

Records also were set for ownership of motor vehicles and the number of miles driven.

The latest census of manufacturers reveals that U.S. automotive retail sales account for 22.5% of all retail sales. Combined sales of automotive retail, wholesale and service businesses amount to 18% of dollar volume of all U.S retail, wholesale and service firms.

Manufacturers outside the motor vehicle industry itself also produce great quantities of automotive products, such as electrical equipment and rubber parts. A census report shows that in a single year U.S. produces a billion dollars worth of passenger car tires. A year's output of automotive storage batteries is worth some $250 million, and automotive metal stampings valued at $552 million are turned out annually from plants classified in other than the motor vehicle industry.

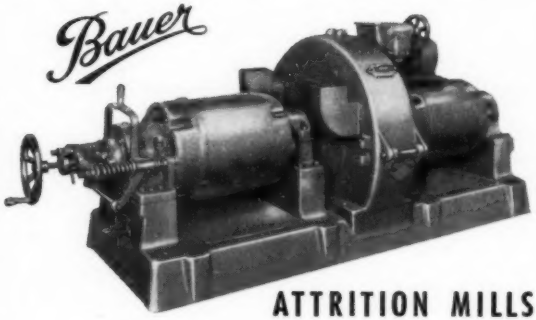
Factory sales of station wagons in 1960 topped a million for the first time in history.

Special motor vehicle tax collections reached a new high of $10.6 billion in 1960, including federal excise taxes of $4.5 billion. Taxes take 26c of every dollar included in the delivered price of a new car.

The 520,602 automotive retail, wholesale and service businesses in the U S. employ 2.4 million workers and generate sales totalling about $93.6 billion annually.

The traffic death rate continued a steady decline reaching a new low of 5.3 deaths per 100 million miles of travel.

You'll gain by contacting us



ATTRITION MILLS

We have the men and machines to serve the asbestos industry. Our double-revolving-disc attrition mills, for instance, are proving their superiority in grinding and upgrading asbestos fiber.

These mills reduce screenings and floats to minus 80 mesh.

They upgrade minus 65 mesh fiber.

They fluff fiber.

You are invited to ask for literature and complete information. Our engineering and research facilities are at your service.

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Canadian Agents: — Lynn Macleod Engineering Supplies, Ltd., Thedford Mines, Quebec.

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AFRICA (Rhodesia)

(Published by Rhodesian Mining and Engineering)

Tons 2,000 lbs.

Production for January 1961	13,027.65
Valued at	£ 740,199.00*
Production for January 1960	11,767.68
Valued at	£ 593,280.00*
Production for 1960	133,963.27
Valued at	£7,471,905.00*
Production for 1959	119,699.46
Valued at	£7,405,258.00*

*Corrected to the nearest £.

AUSTRALIA

(Published by Bureau of Mineral Resources)

Tons 2,000 lbs.

	Quarter Ending June 30, 1960
Production	
Chrysotile	296
Crocidolite	3,264
	3,560
Imports	
Amosite	2,717
Chrysotile	6,240
Crocidolite	23
Other	432
	9,412
Exports	
Chrysotile	20
Crocidolite	2,586
Other	16
	2,622

ARIZONA ASBESTOS

Mined and Milled by

JAQUAYS MINING CORPORATION

1219 S. 19th Avenue

PHOENIX, ARIZONA

Producers of Soft, Low Iron, White Chrysotile
Crudes and Filter Fibre

MINES AND MILL IN GILA COUNTY

CANADA

(Dept. of Mines, Province of Quebec)

Tons 2,000 lbs.

Production for January 1961 (Quebec)	55,188
Other Provinces	5,417
	60,605

Total production for January 1960 was 65,585 tons.

By Grades:

	Year 1959	Year 1960
Crudes	355	232
Fibers	345,863	419,773
Shorts	645,978	635,267
	992,196	1,055,272

CYPRUS

(From Inspector of Mines)

Tons 2,000 lbs.

4th Quarter (Ending December 31, 1960)

	October	November	December
Rock Mined	236,740	53,133	41,893
Rock Treated	92,981	89,071	32,836
Fibre Produced	2,776	2,952	2,190
Fibre Exported	2,800	1,122	444

AMERICAN BRAKE SHOE COMPANY

Annual Report—1960

Expansion, both domestic and international, highlighted operations of American Brake Shoe Company in 1960. Steps taken to establish or acquire facilities to serve growing markets in the United States and abroad were costly—as reflected in lower earnings for the year—but should bring short and long-range earnings improvement.

Net earnings of $5,666,874 in 1960 were 26% below 1959 earnings of $7,681,383. Net earnings per share were $3.48 in 1960 and $4.72 in 1959.

1960 shipments, valued at $164,586,507, were slightly below those for 1959. The decline in domestic shipments—caused by the softness that developed in the durable goods portion of the American economy during the year—was partially offset by an increase in shipments of international subsidiaries.

NATIONAL GYPSUM COMPANY
Annual Report—1960

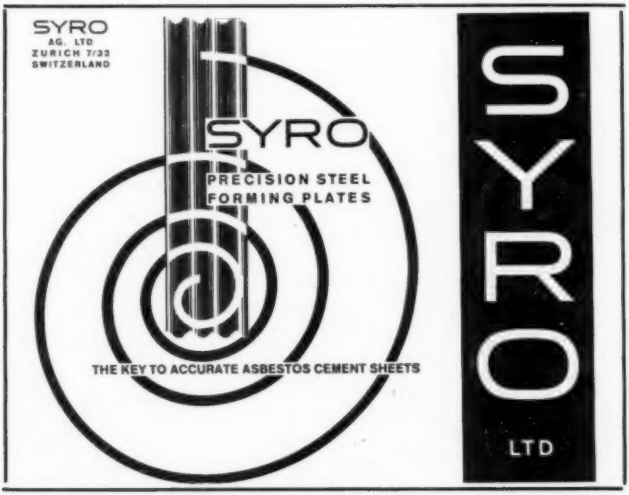
Earnings for the year 1960 amounted to $23,492,998, equal to $3.66 per share on the 6,297,705 shares of common stock outstanding. Earnings reported for the previous year were $25,561,679 equal to $4.56 per share on the fewer shares then outstanding.

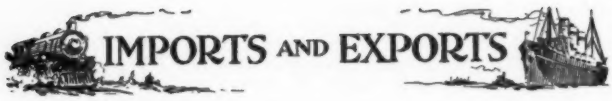
Sales of $227,169,246 were up from $226,277,806 reported for 1959.

Total Balance Sheet assets of $278,447,475 showed an increase of $27,514,671 over the previous year. Working capital amounted to $73,516,738, an increase of $10,673,274 during the year. The net amount of property, plant and equipment was up $17,472,078.

Capital expenditures during 1960 totaled $18,948,564 covering those required for the completion of the Lorain, Ohio, gypsum plant, major improvements at the cement mill in Alpena, Michigan, replacements of equipment and plant improvements.

In the year 1961 it is expected that capital expenditures will total approximately $18,000,000 including those for construction of a new gypsum mill at Tampa, Florida. Funds now on hand and expected from retained earnings and depreciation during the coming year should more than cover these capital expenditures.





Imports Into U.S.A.

(Figures by Bureau of Census)

Unmanufactured Asbestos:

	November 1960 Tons (2,240 lbs.)
From: Canada	42,672
Union of South Africa	4,580
Rhodesia (Nyasaland)	169
United Kingdom	96
Other Countries	90
	47,607
Valued at:	$5,184,542

By Grades:

Crude, No. 1, Chrysotile, Rhodesia (Ny)	22
Crude, Blue, Union of South Africa	2,092
Crude, Blue, Rhodesia (Nyasaland)	147
Crude, Amosite, Union of South Africa	2,444
Textile Fiber, Chrysotile, Canada	1,369
Shingle Fiber, Chrysotile, Canada	6,175
Shingle Fiber, Chrysotile, Other Countries	54
Paper Fiber, Chrysotile, Canada	2,393
Other Fibers, Chrysotile, Canada	32,735
Other Fibers, Chrysotile, United Kingdom	96
Other Fibers, Chrysotile, U. of S. Africa	44
Other Fibers, Chrysotile, Other Countries	36
	47,607

Manufactured Asbestos Goods:

	November 1960 Quantity (lbs.)	Value
Asbestos Yarn	37,460	$ 21,804
Asbestos Packing	6,373	5,657
Asbestos Shingles (Impreg.)		
Belgium	169,992	26,507
Other Countries	2,546	828
A-C Pipe & Fittings (Not Impreg.)		
Mexico	700,920	60,822
Belgium	1,335,994	107,337
W. Germany	525,916	27,019
Austria	579,913	24,840
Italy	1,891,305	87,276

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pressure pipes

socket pipes

flat and corrugated sheets

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Other Countries	169,258	8,766
A-C Mfgs. Other (Not Impreg.)		
Belgium	267,572	27,166
Other Countries	122,000	6,988
Asbestos Manufactures—Other	..	4,107
	5,809,179	$ 409,117

Exports From U.S.A.

(Figures by Bureau of Census)

Unmanufactured Asbestos:

	December 1960	
	Tons (2,240 lbs.)	Value
To: Canada	238	$ 26,044
Europe	170	39,463
Mexico	43	6,475
South America	5	1,800
Other Countries	16	4,924
	472	$ 78,706

Manufactured Asbestos Goods:

	December 1960	
	Quantity	Value
Asbestos Cement & Pipe Covering .Lbs.	828,167	$ 295,451
Asbestos Textiles & Yarn .....Lbs.	34,450	42,876
Asbestos Packing .....Lbs.	189,434	226,693
Asbestos Clutch Facing .....No.	91,120	64,025
Asbestos Bk.Lng. (Mld.&S.Mld.) Lin. Ft.	66,033	32,640
Asbestos Brake Lining, Other .....Lbs.	406,438	356,136
Asbestos Construction Material ....Lbs.	1,466,532	208,205
Asbestos Manufactures—Others	..	47,042
		$1,273,068

UNION ASBESTOS & RUBBER COMPANY

Annual Report—1960

Union Asbestos & Rubber Company, Chicago, Illinois, announced that its earnings for the year ending December 31, 1960, amounted to $13,783, compared to $121,288 for the preceding year.

Sales increased to $11,798,374 in 1960, compared with $10,199,512 in 1959.

Edwin E. Hokin, President, attributed the decline in earnings to extraordinary expenses involved in closing the company's plant in Blue Island, Illinois.

Your dependable, established, volume supplier of high-grade asbestos **for every application is Lake Asbestos of Quebec. LAQ is an independent source of uniform quality chrysotile asbestos fibre and its annual capacity of 100,000 tons is your assurance of continuous supplies. For additional information, call or write Lake Asbestos of Quebec, Ltd., 120 Broadway, New York 5, N. Y., or your nearest sales agent.**

NORTH AMERICAN SALES AGENTS:

California, Los Angeles
E. B. Taylor Company

California, San Francisco
E. M. Walls Company

Colorado, Denver
Braun-Knecht-Heimann Co.

Illinois, Chicago
Central Solvents & Chemicals Co.

Indiana, Indianapolis & Ft. Wayne
Hoosier Solvents & Chemicals Corp.

Kentucky, Louisville
Dixie Solvents & Chemicals Co.

Massachusetts, Allston
D. H. Litter & Co., Inc.

Michigan, Detroit
Baker & Collinson

Missouri, Kansas City & St. Louis
Missouri Solvents & Chemicals Co.

New York, Buffalo
Buffalo Solvents & Chemicals Corp.

New York, New York
D. H. Litter & Co., Inc.

Ohio, Cincinnati
Amsco Solvents & Chemicals Co.

Ohio, Cleveland
A. C. Mueller Co., Inc.

Oregon, Portland
Van Waters & Rogers, Inc.

Pennsylvania, Conshohocken
Van Horn, Metz & Co., Inc.

Texas, Houston
Federated Metals Division

Utah, Salt Lake City
Braun-Knecht-Heimann Co.

Washington, Seattle
Van Waters & Rogers, Inc.

Wisconsin, Milwaukee
Wisconsin Solvents & Chemicals Corp.

In Canada: Toronto & Montreal
Federated Metals Canada, Ltd.

LAKE ASBESTOS OF QUEBEC, LTD.
a subsidiary of American Smelting and Refining Company

ASARCO

Exports From Canada

(Published by Dominion Bureau of Statistics)

Unmanufactured Asbestos:

	December 1960 Tons (2,000 lbs.)	Value
Crude		
United States	35	$ 52,150
United Kingdom	..	..
South America	..	..
Central America & Mexico	..	..
European Countries	19	15,403
Other Countries	15	11,522
	69	$ 79,075
Milled		
United States	9,455	$ 2,057,004
United Kingdom	3,511	712,292
South America	3,427	641,506
Central America & Mexico	751	125,056
European Countries	31,460	5,997,605
Other Countries	17,156	2,560,318
	65,760	$12,093,781
Shorts		
United States	26,493	$ 1,431,712
United Kingdom	6,083	314,108
South America	994	59,596
Central America & Mexico	259	11,966
European Countries	13,884	788,181
Other Countries	9,036	767,275
	56,749	$ 3,372,838
Grand Total— Unmanufactured Asbestos:	122,578	$15,545,694
Manufactured Asbestos Goods:		
Brake Lining		$ 36,505
Packing		984
Other Materials		24,401
		$ 61,890

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LOW TEMPERATURE INSULATION
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NEWS OF THE INDUSTRY

HAPPY BIRTHDAY

Philip A. Meyer, Vice President & Director, Nicolet Industries, Inc., Florham Park, New Jersey, April 16.

Robert W. Weaver, Vice President, Grant Wilson, Inc., Chicago, Illinois, April 16.

Joseph D. Francis, Secretary-Treasurer, Asbestos Products, Inc., St. Paul, Minnesota, April 17.

Lorne Bain, President, Asbestos Erectors of Canada Limited, Montreal, Canada, April 19.

George A. MacLellan, Managing Director, George MacLellan & Company, Glasgow, Scotland, April 19.

Alvan D. Simpson, President, Asbestos Erectors, Inc., Bound Brook, New Jersey, April 19.

H. J. Dowd, First Vice President, Smith Asbestos Products, Inc., Millington, New Jersey, April 22.

John R. Skidmore, Secretary & Treasurer, Pacific Asbestos-Cement Products Corporation, San Bernardino, California, April 22.

H. B. Johnson, District Manager, The Philip Carey Manufacturing Company, Chicago, Illinois, April 23.

Edward R. Stevens, President, Baldwin-Ehret-Hill, Inc., Trenton, New Jersey, April 25.

Joseph Matulicz, Partner, Amity Asbestos Associates, Brooklyn, New York, April 26.

Frank R. Hickory, President, Asbestos Products, Inc., St. Paul, Minnesota, April 27.

J. Carroll Johnston, President, Atlas Asbestos Company, North Wales, Pennsylvania, April 28.

Robert D. Bradford, President, Lake Asbestos of Quebec Limited, New York City, April 29.

Merlin W. Simon, Secretary, Sprinkmann Sons Corporation, Milwaukee, Wisconsin, April 30.

Richard H. Jaffer, President, York Insulation Company, Inc., Hillside, New Jersey, May 1.

R. G. Bennett, Roofing Manager, A. H. Bennett Company, Minneapolis, Minnesota, May 4.

Guy George Gabrielson, Jr., President, Nicolet Industries, Inc., Florham Park, New Jersey, May 4.

Gerard A. Reynolds, Vice President, Armor Products, Inc., New York City, May 4.

J. J. Mundet, President & Chairman of the Board, Mundet Cork Corporation, North Bergen, New Jersey, May 9.

C. G. Dandrow, Vice President, Johns-Manville Sales Corporation, New York City, May 12.

Frank C. Waters, Marketing Division Manager, Wunderlich Limited, Sydney, N.S.W., Australia, May 12.

BELL ASBESTOS MINES LTD.

THETFORD MINES, QUE.

CANADA

Producers of

Raw Asbestos Crudes

& Fibres

Sales Representatives

for

Cassiar Asbestos Corporation Limited

Leslie M. Cassidy, Director & Consultant, Johns-Manville Corporation, New York City, May 13.

L. T. Bennett, Vice President, A. H. Bennett Company, Minneapolis, Minnesota, May 14.

To all these gentlemen we extend congratulations and best wishes on the occasion of their birthdays.

H. L. Evans has been appointed to the newly-created position of Vice President of General Manufacturing, THE FLINTKOTE COMPANY.

In his new post, Mr. Evans will assume coordinating responsibility for plant facilities planning and operations and will be concerned with all aspects of manufacturing. Mr. Evans, who is also a company director, will continue to be headquartered at the Flintkote plant in East Rutherford, New Jersey.

R. McLean Campbell was elected to the Board of Directors of THE FLINTKOTE COMPANY at the annual meeting held in Boston, Massachusetts on March 22, 1961. This election increases the number of directors from 14 to 15.

Mr. Campbell is President of Harry T. Campbell Sons's Corporation of Baltimore, Maryland, an operating subsidiary of Flintkote.

M. A. F. Newton has been appointed Managing Director of CAPE BUILDING PRODUCTS LIMITED of Cowley Bridge Works, Uxbridge, England, the building material subsidiary of The Cape Asbestos Company Limited. He has been on the Board of Cape Building Products since its formation in 1956.

Mr. Newton joined The Cape Asbestos Company Limited in 1951 as Publicity Manager and in 1953 became Assistant Commercial Manager (Overseas). In 1958 he was appointed Sales Manager (Overseas) in charge of the whole of the company's export business. He is a Director of Cape Insulation and Asbestos Products Limited, formed this year.

ASBESTOS BULLETIN

A new journal bringing in each issue abstracts of over 100 patents and articles on the mining and processing, and uses of asbestos. Special chapters on mining, asbestos cement, asbestos textiles and friction materials, reinforced plastics, and plastic building and insulating materials. Yearly subscription £9 -15- Od from:

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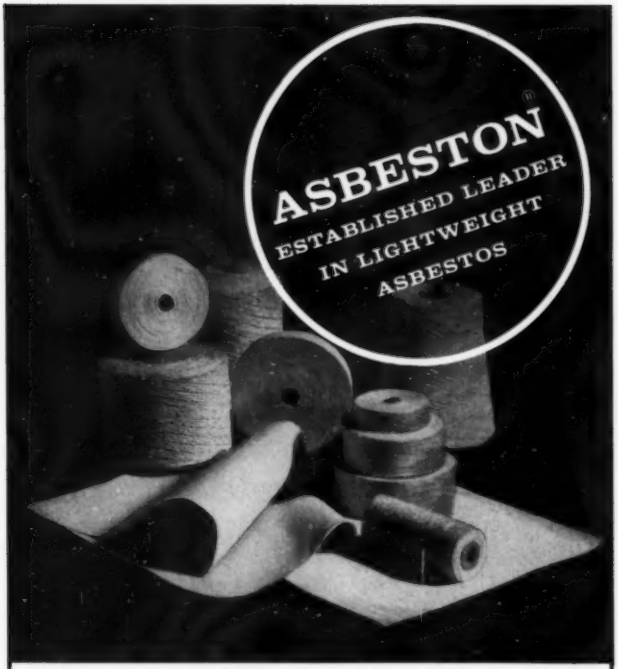
ASBESTOS STOCK QUOTATIONS

(These figures are compiled from the Commercial & Financial Chronicle. No guarantee as to their correctness.)

		March 1961		
	Par	Low	High	Last
Advocate Mines, Ltd.	1	$3.45	$4.10	$3.85
American Brake Shoe	np	43½	46	44¾
Armstrong Cork (Com)	1	55¼	60¼	60¼
Armstrong Cork (Pfd)	np	81¼	83	82
Asbestos Corporation	np	25¼	27½	27⅜
Philip Carey	10	31	36	33
Cassiar Asbestos Corp.	np	12⅞	13½	13⅛
Celotex (Com)	1	26½	30⅜	28⅜
Celotex (Pfd)	20	18⅛	19	18¾
Certain-Teed	1	34½	44	44
Fibreboard	np	29¾	34½	33
Flintkote (Com)	5	30⅝	34⅛	33¼
Flintkote (Pfd)	np	84	87½	86½
Johns-Manville	5	68⅛	74	70
National Gypsum (Com)	1	59	61¼	60⅞
National Gypsum (Pfd)	np	95	97	97
Porter, H. K.	100	90½	91½	91⅜
Raybestos-Manhattan	np	75	84	81
Ruberoid	1	41¾	45	45
Unarco	5	7⅝	10⅛	9¾
United Asbestos	1	$3.75	$4.60	$4.30
U. S. Gypsum (Com)	4	106	112½	107½
U. S. Gypsum (Pfd)	100	153	157	157
U. S. Rubber (Com)	5	49¾	54¾	53⅞
U. S. Rubber (Pfd)	100	155	158	157½

FIGHT CANCER WITH A CHECKUP AND A CHECK



When you need asbestos in any textile form, specify ASBESTON . . . for twenty years the leader in lightweight asbestos textiles.

And when unusual or special high-temperature conditions must be met, call on our experienced technicians to adapt the unique ASBESTON spinning process to the special yarns or fabrics you need.

For detailed information on how ASBESTON yarns, fabrics or tapes can serve you best, write us today.

Textile Division

United States Rubber

Rockefeller Center, New York 20, N. Y.

CURRENT RANGE OF PRICE

As of April 10, 1961

ARIZONA—	Per Ton of 2,000 lbs., f.o.b. Globe, Arizona		
No. 1 Crude (soft)	$1,475.00	to	$1,800.00
No. 2 Crude (soft)	830.00	to	1,050.00
Group-3 (Filtering & Spinning)	350.00	to	450.00
Group-4 (Plastic & Filtration)	190.00	to	250.00
Group-5 (Plastic & Moulding)	125.00	to	177.00
Group-7 (Refuse & Shorts)	60.00	to	100.00

CANADA—	Per Ton 2,000 lbs. f.o.b. Mine Canadian Currency		
Group No. 1 (Crude No. 1)	$1,410.00	to	$1,475.00
Group No. 2 (Crude No. 2); Crude Run-of-Mine and Sundry	610.00	to	875.00
Group No. 3 (Spinning Fibre)	350.00	to	650.00
Group No. 4 (Shingle Fibre)	180.00	to	245.00
Group No. 5 (Paper)	120.00	to	150.00
Group No. 6 (Waste, Stucco or Plaster)	..		86.00
Group No. 7 (Refuse or Shorts)	40.00	to	80.00

VERMONT—Per ton of 2,000 lbs. f.o.b. Hyde Park or Morrisville, Vt.

Group No. 3 (Spinning & Filtering)	$ 353.00	to	$ 440.00
Group No. 4 (Shingle Fibre)	181.00	to	218.00
Group No. 5 (Paper Fibre)	120.00	to	142.00
Group No. 6 (Waste, Stucco or Plaster)	..		86.00
Group No. 7 (Refuse or Shorts)	41.00	to	75.00

RAYBESTOS-MANHATTAN, INC.

Annual Report—1960

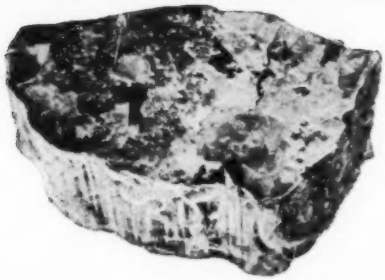
The 1960 sales of Raybestos-Manhattan, Inc. were $82,114,341 and show a decrease of 7.4% compared with 1959 sales of $88,710,186.

The 1960 net income was $2,911,584, or $4.61 per share, compared with 1959 net income of $3,904,723, or $6.19 per share. The capital stock outstanding for both years was 630,600 shares.

In addition, the wholly-owned Canadian subsidiary showed 1960 sales of $2,592,528, with a net income of $43,228, or 7c per share, compared with 1959 sales of $2,839,592 and a net income of $139,549, or 22c per share.

The Company continues to show an excellent financial condition. At December 31, 1960, the cash funds of $7,992,987 were $3,115,856 in excess of all liabilities totaling $4,877,131. Raybestos will have ample funds to finance its planned additional facilities and improvements for 1961.

Built on a rock



Crude Asbestos is the rock on which B.B.A. is built. We use it to make everything for which asbestos is best, from yarns and cloths to all types of jointings and packings —and the world famous MINTEX friction materials and MINTEX Industrial Plastics. Our factory leads in production; our Research Laboratories keep us at the head of development; Asbestos is our subject.

B.B.A

British Belting & Asbestos Ltd

CLECKHEATON · YORKSHIRE · ENGLAND

ASBESTOS CORPORATION LIMITED

Annual Report—1960

Net income for 1960 totalled $3,259,653, or $1.81 per share, compared with the figure of $3,057,379, or $1.69 per share for 1959.

Notwithstanding the exceptionally keen competition prevalent in the industry during the past year, sales increased 7% in volume and more than 8% in value over 1959. This modest improvement was entirely attributable to overseas export sales which were at higher levels in all areas. The demand for the asbestos-cement grades, particularly overseas, was strong and prospects for a continuance of this situation appear favorable, with the construction of new plants and expansion of existing facilities under way in several countries.

Aside from a five week lay-off during last winter at the King-Beaver Mine, all properties were running at or near capacity during 1960 in order to supply the increased demand for asbestos-cement fibres. Underground development continued at a slightly higher rate and development of the new open pit ore made available in the so-called Consolidated wall area advanced according to plan at King-Beaver. At the British-Canadian Mine, fibre production was increased by 24% in response to the strong demand. At the Normandie Mine, more ore was handled and more fibre produced than in any other year.

AVAILABLE FOR IMMEDIATE DELIVERY

Complete Set of

ASBESTOS CEMENT SHEETS MACHINERY

MAGNAGNI TYPE

including three sets of rollers and equipment for the production of corrugated sheets of 950 mm width, with six waves of 57 mm height each and 152 m length from peak to peak; flat sheets of 1200 mm width, and arched sheets. The machinery is in excellent working condition; prepared to install machinery at buyer's site if necessary.

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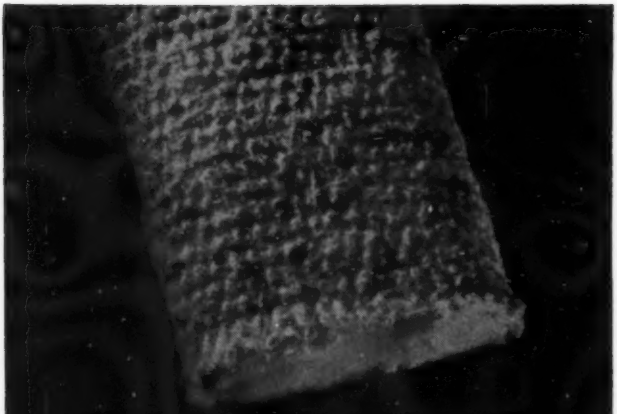

R/M INSULATING TAPES SAVE WEIGHT IN INSULATING SHIPBOARD AND PLANT PIPING

R/M Thermal Insulating Tapes, made to Military Spec. MIL-1-15349A, consist of a tubular woven asbestos sheath in A.S.T.M. Grade AA and a stuffer of fiber glass slivers. The stuffer or insulating medium provides a weight saving of 6-19% in Type I and 20-36% in Type II, compared with the same sheath containing Amosite asbestos stuffer. R/M supplies these tapes in the three sizes covered by MIL-1-15349A and in eight additional sizes. Generally specified for insulating small piping aboard ship, they are also used in industry wherever vibration or physical abuse would damage or destroy standard sectional insulating materials. Write for samples and product data.

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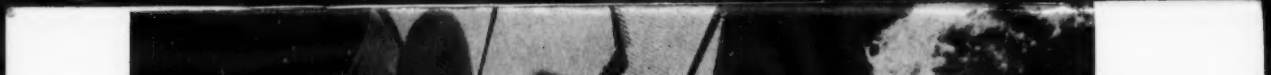
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